

ABSTRACT OF THE DISCLOSURE

Methods and apparatus for sidelobe suppression in a radiation patterning tool. Sidelobe artifacts are mitigated by identifying elements as a function of the radiation wavelength for forming desired profiles on a semiconductor wafer. Diffraction rings are calculated about each of the elements to identify sidelobe interference zones and intersections of diffraction rings are located. Sidelobe inhibitors are located at the identified locations. A method for forming a mask with the addition of sidelobe inhibitors as well as method for determining the location of placement of sidelobe inhibitors is also disclosed.

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